

Serial No. 10/749,271
Amendment dated August 21, 2006
Office Action dated April 20, 2006

REMARKS/ARGUMENTS

Claims 1-30 are pending in this application. Claims 1-2, 4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Merchant et al., U.S. Patent No. 6,385,715. Claims 3, 9-15, 18-23, 25-27, and 29-30 are rejected under U.S.C. 103(a) as being unpatentable over Merchant et al., U.S. Patent No. 6,385,715. Claims 5-6 and 16-17 are rejected under U.S.C. 103(a) as being unpatentable over Merchant et al., U.S. Patent No. 6,385,715, in view of Merchant et al., U.S. Patent No. 6,163,838 (hereinafter referred to as 838). Claims 8, 24, and 28 are rejected under U.S.C. 103(a) as being unpatentable over Merchant et al., U.S. Patent No. 6,385,715, in view of Topham et al, U.S. Patent No. 6,944,853.

Applicants respectfully submit the Office Action assertions regarding the Drawings are incorrect. First, claim 3 depends from claim 1, wherein (in the embodiments of claim 1 and separately the embodiment of claim 3) the scoreboard storing the "status information" at issue is clearly illustrated in at least in Figures 3, 4, and 9. Claim 3 merely further defines the "status information" limitation of claim 1. Next, the limitation "multiple channel processor" in the embodiment of claim 5 is clearly illustrated in that "processor" 305 (e.g., Figure 3) may be a multiple channel processor. See e.g., paragraphs [0029]-[0031] of the specification for support. The objections to the Drawings should be withdrawn.

Applicants respectfully submit the cited references do not teach, suggest or describe at least "An adaptive replay system comprising:... *a selector device coupled to said staging area to place said instruction in an optimal position within said replay loop...*" (e.g., as described in claim 1).

The Office Action asserts Merchant teaches such a selector device at column 6, lines 7-25, further including citations to element 150 and 154. See Office Action dated 4/20/2006, paragraph 10, page 4. Applicants disagree.

Element 150 of Merchant is described as a checker, while element 154 is described as a replay queue *unloading* controller (*emphasis added*). The cited section states:

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If the checker 150 determines that the instruction has not executed properly, the instruction will then be returned to multiplexer 116 to be replayed (i.e., re-executed). Each instruction to be replayed will be returned to mux 116 via one of two paths. Specifically, if the checker 150 determines that the instruction should be replayed, the Replay Queue Loading Controller 154 determines whether the instruction should be sent through a replay loop 156 including staging queues E and F, or whether the instruction should be temporarily stored in a replay queue 170 before returning to mux 116. Instructions routed via the replay loop 156 are coupled to mux 116 via line 161. Instructions can also be routed by controller 154 for temporary storage in replay queue 170 (prior to replay). The instructions stored in replay queue 170 are output or unloaded under control of replay queue unloading controller 179. The instructions output from replay queue 170 are coupled to mux 116 via line 171. The operation of replay queue 170, Replay Queue Loading Controller 154 and Replay Queue Unloading Controller 179 are described in detail below.

Applicants submit the cited section does not teach the relevant limitations; indeed, the cited section does not refer to optimally rearranging the order of instructions at all. The first sentence of the cited section introduces the “re-execut[ion]” process. Specifically, if the checker 150 determines the instruction did not execute properly, it is returned to the multiplexer 116. To do this, *a conditional determination* is made which decides to send the instruction down one of two paths. The first outcome of this *conditional determination* sends the instruction to the replay loop 156, while the second outcome sends it temporarily to the replay queue 170 before sending it to the mux 116. Instructions stored in replay queue are sent to controller 179, and are coupled to mux 116 (described above) by line 171.

Therefore, Applicants submit the heart of the cited section is this two-outcome *conditional determination* of where to send an instruction that hasn't executed properly. However, making a conditional determination upon which one of two steps may be followed is not the same as placing an instruction in an optimal position at all. The cited section does not describe either a selector device, or the selector device's ability to *place an instruction in an*

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optimal position anywhere. Indeed, the cited section does not discuss *placement* of an instruction for any reason anywhere (other than re-sending the instruction as discussed above). In order to support a proper rejection, the cited section must describe at least placing an instruction in an optimal position with a replay loop. The Merchant reference does not. Applicants submit for at least this reason, this section is inadequate to support a proper rejection of independent claim 1.

Merchant '838 fails to make up for the deficiencies of Merchant '715. Merchant '838 is also directed toward a replay system for the purpose of replaying instructions, and similar to above fails to describe at least a selector device's ability to *place an instruction in an optimal position* anywhere as described in embodiments of the present application.

Finally, Topham fails to make up for the deficiencies of Merchant '715 as well. Topham is directed toward the predicated execution of instructions in processors, but does not describe at least a selector device's ability to *place an instruction in an optimal position* anywhere as described in embodiments of the present application.

Therefore, since for at least the preceding reasons each and every limitation is not taught or suggested in the cited references, Applicants submit they are inadequate to support proper 35 U.S.C. §102(b) and §103(a) rejections, and independent claim 1 should be allowed. Independent claims 13, 23, and 27 contain similar allowable limitations. Claims 2-12, 14-22, 24-26, and 28-30 depend from allowable independent claims and therefore are allowable as well.

For at least all the above reasons, the Applicants respectfully submit that this application is in condition for allowance. A Notice of Allowance is earnestly solicited. The Examiner is invited to contact the undersigned at (408) 975-7500 to discuss any matter concerning this

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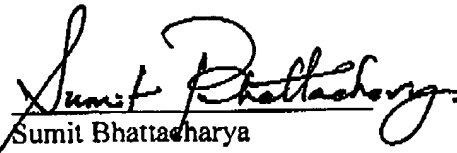
application. The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. §1.16 or §1.17 to Deposit Account No. 11-0600.

Respectfully submitted,

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